

DEFENSE MAPPING AGENCY

FY 1997 BUDGET ESTIMATE SUBMISSION

RDT&E, DEFENSE-WIDE

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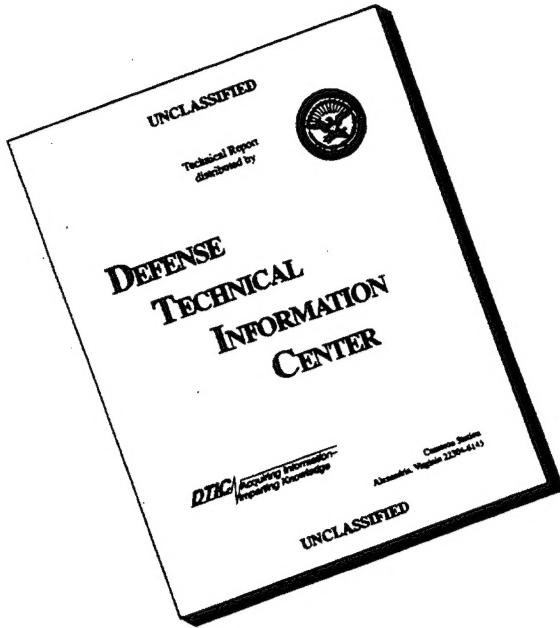


MARCH 1996

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**DEFENSE MAPPING AGENCY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE
FY 1997 BUDGET ESTIMATES**

(\$ In Thousands)

<u>SECUR</u>	<u>BUDGET</u>	<u>RESEARCH PROGRAM</u>	<u>TITLE</u>	<u>FY 1995</u>	<u>FY 1996</u>	<u>FY 1997</u>
<u>CLASS</u>	<u>ACTIVITY</u>	<u>CATEGORY</u>		<u>TOA</u>	<u>TOA</u>	<u>TOA</u>
(U) 7	7		Operational Systems Development	76,228	71,932	100,997
(U) 7	6.6		Operational Systems Development (Other)	76,228	71,932	100,997
(U) 7	6.6	0305139B	DMA MC&G Production System Improvement	60,478	71,932	100,997
(U) 7	6.6	0305159B	Defense Reconnaissance Support Activities	15,750	0	0
Total RDT&E - Direct				76,228	71,932	100,997
Reimbursements				10	850	850
TOTAL PROGRAM				76,238	72,782	101,847

Note: Beginning in FY 1996, Defense Reconnaissance Support Activities (DRSA) (PE 0305159B) was merged into DMA MC&G Production System Improvement (PE 0305139B) because the activities contained in DRSA evolved into enhancements to the overall DMA MC&G production system.

This budget is included in the Joint Military Intelligence Program (JMIP) Congressional Justification Book.

EXHIBIT R-1

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DEFENSE MAPPING AGENCY
FY 1997 BUDGET ESTIMATE SUBMISSION
RDT&E, DEFENSE-WIDE

PROGRAM ELEMENT COMPARISON SUMMARY
INTRODUCTION AND EXPLANATION OF CONTENTS

PROGRAM ELEMENT

Budget Activity 7: Operational
Systems Development

REMARKS

0305139B DMA MC&G Production
System Improvement

FY 95 program reflects a \$3,798 thousand reprogramming from 0305159B Defense Reconnaissance Support Activities and a \$83 thousand internal DOD reduction as adjustments to the FY 1996/1997 President's Budget Submission.

Beginning in FY 1996, 0305159B Defense Reconnaissance Support Activities (DRSA) merges into 0305139B DMA MC&G Production System Improvement because the activities contained in DRSA have evolved into enhancements to the overall MC&G production system and therefore are more appropriately justified in 0305139B DMA MC&G Production System Improvement.

0305159B Defense Reconnaissance
Support Activities

FY 95 program reflects a \$3,798 thousand reprogramming to 0305139B MC&G Production System Improvement.

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

 Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature
 Program Element (PE): DMA MC&G Production System Improvement /0305139B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to complete	Total Cost
Total Program Element (PE) Cost	60,478	71,932	100,997	70,135	103,090	115,777	71,045	Cont	Cont
Project 100 New Products	28,294	15,967	14,566	13,789	16,030	18,996	18,422	Cont	Cont
Project 200 New Processes	20,986	38,808	70,110	41,366	64,160	78,269	32,583	Cont	Cont
Project 300 New Concepts	11,198	17,157	16,321	14,980	22,900	18,512	20,040	Cont	Cont

A. (U) Mission Description and Budget Item Justification:

This program element includes RDT&E costs associated with modifying, upgrading, or improving the Defense Mapping Agency (DMA) production system and any related Mapping, Charting and Geodesy (MC&G) development activities that: (1) foster new DMA products; (2) introduce, improve, or adapt DMA operational processes to enhance interfaces or functionality; and (3) use new technology in the development of concepts that enhance processes and products, including the evolution of the MC&G production system to provide global geospatial information and services on-line electronically to military customers world-wide.

MC&G Production System Improvement (PE 0305139B) is found in Budget Activity 7 (Operational Systems Development) because the effort funded under this element supports the DMA MC&G production system. Beginning in FY 1996, Defense Reconnaissance Support Activities (DRSA) (PE 0305159B) was merged into this PE because the activities contained in DRSA evolved into enhancements to the overall DMA MC&G production system.

B. (U) Program Change Summary

	FY 1995	FY 1996	FY 1997	Total Cost
FY 1996/1997 President's Budget	56,763	80,131	83,932	Cont
Adjustments to Appropriated Value				20,300
Program Decision Memorandum I increase for exploitation of the Enhanced Imagery System and migration of the MC&G Production System Reprogrammed from Defense Reconnaissance Support Activities (PE 0305159B)				3,798
Congressional Reduction			-6,838	
Inflation Adjustment		-1,361	-3,235	
OSD Management Adjustment		-83		
Current Budget Submit/President's Budget	60,478	71,932	100,997	Cont

Change Summary Explanation:

The increases in FY 1996 and FY 1997 to MC&G Production System Improvement (PE 0305139B) reflect the transfer of funds previously identified under Defense Reconnaissance Support Activities (PE 0305159B). The FY 1997 increase also reflects a Program Decision Memorandum increase to develop the capability to exploit the Enhanced Imagery System which is replacing DMA's existing primary imagery source, and to migrate the DMA MC&G production system to an open-systems, standards-based architecture that relies on commercial-off-the-shelf products and is designed for easy insertion of new technology and system expansion.

Exhibit R-2

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Defense Mapping Agency FY 1997 Budget Estimates
RDTE & Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity:	R-1 Item Nomenclature Program Element (PE): DMA MC&G Production System Improvement /0305139B						Date:	
Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Total Cost
Project 100 New Products	28,294	15,967	14,566	13,789	16,030	18,996	18,422	Cont

(U) Project Justification Narrative:

- (U) As a combat support agency, DMA is responsible for development and production of new Mapping, Charting, and Geodesy (MC&G) products to meet evolving customer requirements. Key product initiatives include:
 - The Digital Products Data Base (DPDB) which will interface with current and emerging digital systems and will be the primary repository for DMA's digital products.
 - The Master Seafloor Digital Data Base (MSDDB) which is a cooperative effort between Navy, the National Oceanographic and Atmospheric Administration (NOAA), and DMA and will provide these agencies the capability to process and fuse hydrographic/bathymetric and marine geophysical source data holdings to satisfy future hydrographic charting needs and database accessibility.
 - Development of a suite of digital thematically-layered vector products, such as Urban Vector Map (UVMAP), Littoral Supplemental Layer, and Tactical Terrain Data (TTD), designed to support analytical functions of Military Geographic Information Systems currently being integrated into Electronic Battlefield architectures. UVMAP will support evacuation plans and intelligence operations; Littoral Supplemental Layer will support beach assaults/operations; and TTD will support cross-country movement analysis.
 - The Point Positioning Production System (PPPS) which supports the warrior in deriving accurate coordinates for identifiable features within a supported geographical area. PPPS will be used primarily for targeting and mission planning.
 - The Digital Flight Information Publications which will support the Services' mission planning, advanced cockpit and simulator graphics, in-flight operations, and air traffic control by replacing existing paper products.
 - New Product Implementation which modifies the MC&G Production System to allow implementation of future products more effectively and efficiently.
 - Controlled Image Base (CIB) which will support mission planning and theater battle management systems, mission profile development, and medium-accuracy point targeting.
 - Joint Mapping Toolkit (JMTK) which addresses the mapping requirements identified for the Global Command and Control System (GCCS). As the Executive Agent for Mapping, Charting, Geodesy, and Imagery (MC&G&I) in GCCS, DMA is developing standard interoperable MC&G&I exploitation software which will provide the warfighter with a fused, real-time true picture of the battlefield.
 - Terrain Modeling and Simulation activities which respond to emerging customer requirements for accurate, timely representations of the terrain in support of modeling, simulation, mission planning/rehearsal and combat operations. As the DoD Modeling and Simulation Executive Agent for Terrain, DMA is prototyping MC&G terrain products/data sets.

Exhibit R-2

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**Defense Mapping Agency FY 1997 Budget Estimates
RD&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

• (U) FY 1995: Continued design and development of the Master Seafloor Digital Data Base (MSDBB) (\$12,382); continued design of the Digital Products Data Base (DPDB) (\$2,028); continued development of new image-based products such as Controlled Image Base (CIB) (\$1,849); continued development of multi-resolution, data-layered, vector products with Urban Vector Map (UVMAP), Littoral Supplemental Layer, and Tactical Terrain Data (TTD) (\$9,484); commenced standard establishment of Digital Text Standards and developed a prototype Digital Sailing Directions for evaluation (\$495); completed delivery and began production on the Point Positioning Production System (PPPS) (\$1,324); began design of a Digital Flight Information Publication (DFLIP) production capability (\$205); and performed other MC&G new product activities (\$527).

• (U) FY 1996: Continue development of the MSDBB (\$2,000); incorporate the DPDB into the production system (\$2,500); continue development of multi-resolution, data-layered, vector products (\$6,326); begin development of the Joint Mapping Toolkit for GCCS (\$3,500); continue prototype development and evaluation of Digital Text Standards with Automated Notice to Mariners, List of Lights, and Digital Fleet Guides (\$500); and perform other MC&G new product activities (\$1,141).

• (U) FY 1997: Deliver the MSDBB production system (\$2,000); complete the development of multi-resolution, data-layered, vector products (\$1,350); develop the New Product Implementation (\$2,500); complete the DPDB (\$3,600); complete prototype development and evaluation of Digital Text Standards with Flight Planning Guides (\$500); complete prototyping and evaluation of Digital Flight Information Publication (DFLIP) (\$500); continue development of the Joint Mapping Toolkit for GCCS (\$3,300); develop a capability for rapid terrain data generation and exploitation (\$716); and perform other MC&G new product activities (\$100).

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7

R-1 Item Nomenclature

Program Element (PE): DMA M&G Production System Improvement/0305139B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Project 100 New Products	28,294	15,967	14,566	13,789	16,030	18,996	18,422	Cont	Cont

C. (U) Other Program Funding Summary

FY 1995 FY 1996 FY 1997 FY 1998 FY 1999 FY 2000 FY 2001 Cost to Complete Total Cost

Procurement: 5,183 2,321 4,1001 1,8451 2,8001 3,5011 4,4341 Cont Cont

D. (U) Schedule Profile

	FY 1995			FY 1996			FY 1997		
	1	2	3	4	1	2	3	4	
Image-based Products			D	C					
Master Seafloor Digital Data Base (MSDBB)									D
Point Positioning Production System (PPPS)	D	C							
Vector Formatted Products - Interim Terrain Data (ITD), Urban Vector Map (UVMAP), Tactical Terrain Data (TTD), Littoral Supplemental Layer		D			D		D	C	
Digital Products Data Base (DPDB)		ACC							C
Digital Text Standards		D		D		D			D
Digital Flight Information Publications (DFLIP)		ACC		D		D			D
Joint Mapping Toolkit					AOC		AOC		
Terrain Modeling/Simulation							AOC		

ACC-Award of Contract

D-Delivery

C-Completion

1Funds identified in FY 1997-FY 2001 have been transferred to the Operations and Maintenance appropriation in accordance with expense/investment criteria policy change.

Exhibit R-2

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UNCLASSIFIED**Defense Mapping Agency FY 1997 Budget Estimates**

Date: March 1996

Appropriation/Budget Activity: RD&E, Defense-Wide/7
RD&E Program Element/Project Cost Breakdown (R-3) R-1 Item Nomenclature
Program Element (PE): DMA MC&G Production System Improvement/0305139B

A. Project Cost Breakdown (\$ in Thousands)

Project Cost Categories:	FY 1995	FY 1996	FY 1997
Primary Hardware Development			
Ancillary Hardware Development			
Development Support Equipment	2,094	734	
Acquisition			
Research Support Equipment Acquisition	28	559	5
Software Development	4,942	2,977	2,687
Licenses	1,386	367	187
Systems Engineering	4,867	2,651	3,146
Training Development	1,103	287	350
Integrated Logistics Support	283	287	345
Quality Assurance	425	64	248
Reliability, Maintainability, and Availability	28	48	131
Configuration Management	1,358	1,038	670
Technical Data	509	399	612
Developmental Test and Evaluation			
Operational Test and Evaluation	2,650	998	218
Contractor Engineering Support	1,103	607	1,434
Government Engineering Support	3,622	2,044	1,894
Program Management Support	1,811	1,645	1,515
Program Management Personnel	1,188	655	641
Travel	226	160	87
Research Personnel	538	367	350
Miscellaneous	113	80	46
TOTAL	28,294	15,967	14,566

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Exhibit R-3

UNCLASSIFIED**Defense Mapping Agency FY 1997 Budget Estimates**

RDT&E Program Element/Project Cost Breakdown (R-3) Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 **R-1 Item Nomenclature**
Program Element (PE): DMA MCTG Production System Improvement/010512B

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
Project 100 New Products										
Point Positioning Production System E-Systems	C/CPAF/MIPR	Sep-92	9,833	9,833	8,413	1,324	96	0	0	9,833
Vector Product Implementation Intergraph	SS/CPIF/Reqn	Oct-94	17,258	17,258	10,111	3,980	2,767	400	0	17,258
Tactical Terrain Data (RTD) Various	SS/CPAF/Reqn	Dec-94	7,199	7,199	244	4,155	2,600	200	0	7,199
Product Definition Various	C/CPIF/Reqn	Jul-95	2,885	2,885	0	1,176	959	750	0	2,885
Master Seafloor Digital Data Base E-Systems	C/CPAF/Reqn	Sep-94	25,430	25,430	2,548	12,382	2,000	2,000	6,500	25,430
Controlled Image Base Production System Hughes	SS/CPFF/Reqn	Sep-94	3,106	3,106	712	1,849	445	100	0	3,106
Digital Gazetteer on CD-ROM Intergraph	C/CPAF/Reqn	Mar-95	270	270	0	170	100	0	0	270
Digital Products Data Base Various	C/CPAF/Reqn	Jun-95	8,766	8,766	638	2,028	2,500	3,600	0	8,766
New Product Implementation Various	C/CPAF/Reqn	Feb-97	Cont	Cont	0	0	0	2,500	Cont	Cont
Joint Mapping Toolkit Various	MIPR	Mar-96	Cont	Cont	0	0	3,500	3,300	Cont	Cont
Terrain Modeling/Simulation Unknown	MIPR	Jun-97	Cont	Cont	0	0	0	716	Cont	Cont
Miscellaneous Various	Various	Various	5,306	5,306	2,076	1,230	1,000	1,000	0	5,306
Product Development Organizations Total		Cont	Cont	Cont	24,742	28,294	15,967	14,566	Cont	Cont
Support and Management Organizations Total		0	0	0	0	0	0	0	0	0
Test and Evaluation Organizations Total		0	0	0	0	0	0	0	0	0
Government Furnished Property Total		0	0	0	0	0	0	0	0	0

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Defense Mapping Agency FY 1997 Budget Estimates

Appropriation/Budget Activity: RDTE, Defense-Wide/7 Date: March 1996

RDTAS Program Element/Project Cost Breakdown (R-3) R-1 Item Nomenclature
Program Element (PEL): DMA/MCIG Production System Improvement/0105139B

B. Budget Acquisition History and Planning Information (Continued)

Item Description	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Delivery Date	Total prior to FY 1995		Budget FY 1995	Budget FY 1997	Budget to Complete	Total Program
				Method/Type of Funding Vehicle	Delivery Date				
Product Development Organizations									
Project 100 New Products				0	0	0	0	0	0
Product Development Property Total				0	0	0	0	0	0
Support and Management Property Total				0	0	0	0	0	0
Test and Evaluation Property Total				0	0	0	0	0	0
Subtotal Product Development	24,742	28,294	15,967	14,566	Cont	Cont	Cont	Cont	0
Subtotal Support and Management	0	0	0	0	0	0	0	0	0
Subtotal Test and Evaluation	0	0	0	0	0	0	0	0	0
Total Project:	24,742	28,294	15,967	14,566	Cont	Cont	Cont	Cont	0

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Exhibit R-3

UNCLASSIFIED**Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

Appropriation/Budget Activity:	RDT&E, Defense-Wide/7	R-1 Item Nomenclature	Program Element (PE):	DMA	MC&G	Production	System Improvement	Total Cost	Total Complete Cost
Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Project 200 New Processes	20,986	38,808	70,110	41,366	64,160	78,269	32,583	Cont	Cont

(U) Project Justification Narrative:

- (U) As a combat support agency, DMA is responsible for establishing and maintaining the production processes required to support Service and Command Mapping, Charting, and Geodetic (MC&G) requirements. DMA's digital data are a critical requirement of modern precision guided weapons and analytical systems. The focus of DMA's new process initiatives is to enhance the Agency's capability and capacity to produce and deliver digital data to the warfighter instantly and anywhere needed around the globe. Key initiatives within this project include:
 - Crisis support enhancements which will increase the flexibility of the digital production system to provide rapid responses to CINC and Service crisis requirements.
 - Operability improvements which will enhance the flexibility and effectiveness of the DMA production system and increase responsiveness to the warfighter; i.e., improve DMA's ability to extract MC&G information from source materials, improve automated algorithms to increase finishing throughput, and improve speed and accuracy in source analysis processes. These will allow the Agency to sustain productivity with a reduced workforce.
 - Migration of the DMA MC&G production system which will allow transition to an open-systems, standards-based architecture that relies on commercial-off-the-shelf products and is designed for easy insertion of new technology and system expansion. Without migration, system aging and inability to leverage off technology advancements will degrade DMA's ability to support deployment of weapon systems and C4I systems, potentially endangering military operations.
 - Exploitation of Enhanced Imagery System (EIS) provides for the mandatory replacement of DMA's existing primary imagery source and results in an enhancement to the current capability; i.e., the exploitation of hybrid radar which provides an all-weather, day-night data collection source.
 - GGI&S Data Warehouse which will provide a digital repository of Global Geospatial Information globally accessible to DMA customers.
 - Global transmission of Global Geospatial Information to military forces via satellite link and high speed fiber optic networks.
- The Hydrographic Source Assessment System (HYSAS) which is a cooperative effort between Navy, NOAA, and DMA, related to MSDBB, which provides the capability to acquire and manage hydrographic/bathymetric source data and provide the Navy and other users the ability to produce digital navigation products.
- The Modernized Catalog System (MCS) which provides for the basic generation of both soft copy and hard copy catalogs for the CNCS and Services with the capability to update soft copy catalogs via electronic connections.

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**Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

- Implementation of an interface from the Defense Intelligence Agency (DIA) Migration Integrated Data Base (MIDB) to the DMA production system which will enhance the utilization of the data in DMA production processes as well as providing data to support population of the MIDB.

- Migration of the Source Acquisition System architecture to a centralized operation which provides for improved access and responsiveness to DMA production operations.

- The Navigation Safety System which will allow DMA to integrate text and feature-based processes to support Navy, Coast Guard, foreign, and civilian (maritime) users.

- Beginning in FY 1996, this project also includes initiatives previously identified under Defense Reconnaissance Support Activities (PE 0305159B) to implement MC&G data exploitation from commercial systems (e.g., LANDSAT, SPOT and emerging one- and three-meter commercial systems), Synthetic Aperture Radar, and foreign national sources. Developments address data extraction algorithms and operational scenarios and include development of capabilities to process, integrate, and archive commercial image source into the existing DMA production system and increase crisis response capability.

(U) FY 1995: Performed operability improvements on the delivered Digital Production System (DPS) to improve performance (\$7,015); performed crisis support enhancements (\$2,904); continued modernization of the Gravity & Geodesy portion of the DMA MC&G production system (\$1,359); began engineering development of the Hydrographic Source Assessment System (HYSAS) (\$2,700); continued reconfiguration of mainframe computer architecture (\$1,916); began development of an externally mandated new interface to the Defense Intelligence Agency (DIA) Migration Integrated Data Base (MIDB) (\$279); completed upgrade of the Source Acquisition Segment interfaces (\$258); completed development of the Modernized Catalog System (MCS) (\$1,534); began development of the Navigation Safety System (\$729); and performed other MC&G new process activities (\$2,292).

(U) FY 1996: Continue operability improvements on the delivered DPS to improve performance consistent with and in support of the planned migration of the DMA MC&G production system (\$11,445); continue crisis support enhancements (\$3,318); continue development of modifications begun in PE 0305159B (as described in the Joint Military Intelligence Programs (JMIP) Congressional Justification Book) to DMA's production system which will change processes to allow the exploitation of alternative commercial imagery sources (e.g., LANDSAT, SPOT and emerging one- and three-meter commercial systems). Synthetic Aperture Radar, and foreign national sources to enhance primary data gathering capability (\$9,354); continue modernization of the Gravity & Geodesy portion of the DMA MC&G production system (\$650); begin initial design and development for implementation of the process for global transmission of Global Geospatial Information (\$300); continue engineering development of HYSAS (\$5,364); continue reconfiguration of mainframe computer architecture (\$2,313); begin design of new interfaces to the MCS (\$1,198); continue development of the Navigation Safety System (\$2,325); and perform other MC&G new process activities (\$2,541).

(U) FY 1997: Continue operability improvements on the delivered DPS to improve performance (\$4,251); continue crisis support enhancements (\$3,500); continue development and begin delivery of modifications which will change processes to allow the exploitation of alternative commercial and foreign imagery sources (\$13,765); continue modernization of the Gravity & Geodesy portion of the DMA MC&G production system (\$650); continue engineering development of HYSAS (\$9,850); continue design and begin delivery of new interfaces to the MCS (\$816); continue development of the Navigation Safety System (\$3,153); begin migration of the DMA MC&G production system (\$10,000); begin development of the capability to exploit imagery from the Enhanced Imagery System (EIS) (\$24,100); and perform other MC&G new process activities (\$25).

Exhibit R-2

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7

R-1 Item Nomenclature

Program Element (PE): DMA MC&G Production System Improvement/0305139B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Project 200 New Processes	20,986	38,808	70,110	41,366	64,160	78,269	32,583	Cont	Cont

C. (U) Other Program Funding Summary

	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Procurement:	20,901	9,605	15,9451	17,2421	15,5501	14,6431	14,8401	Cont	Cont

Related RDT&E
Program Element 0305159B, Defense
Reconnaissance Support Activities

D. (U) Schedule Profile

	FY 1995	1	2	3	4	1	2	3	4	FY 1996	1	2	3	4	FY 1997
Hydrographic Source Assessment System (HYSSAS)															D
Mainframe Computer Reconfiguration						AOC		D							
Modernized Catalog System (MCS)						C									
Crisis Support Enhancements						AOC				D					
Military Intelligence Integrated Data System/Integrated Data Base (MIIDS/IDB)								D			C				
Alternative Commercial Source Exploitation											D	D			
Transmission of Global Geospatial Mapping Information									AOC			D			
Digital Production System (DPS) Operability Improvements						D	AOC	D		D	AOC	D		D	
Navigation Safety System									AOC			AOC			D
Migration of MC&G Production System													AOC		
Enhanced Imagery System (EIS)										AOC					

AOC-Award of Contract

D-Delivery

C-Completion

1Funds identified in FY 1997-FY 2001 have been transferred to the Operations and Maintenance appropriation in accordance with expense/investment criteria policy change.

Exhibit R-2

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Defense Mapping Agency FY 1997 Budget Estimates

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7

RDT&E Program Element/Project Cost Breakdown (R-3) R-1 Item Nomenclature
Program Element (PE): DMA HcTG Production System Improvement /010519B

A. Project Cost Breakdown (\$ in Thousands)

Project Cost Categories:	FY 1995	FY 1996	FY 1997
Primary Hardware Development	97	2,375	5,399
Ancillary Hardware Development		8	
Development Support Equipment Acquisition	611	287	76
Research Support Equipment Acquisition	40	1,141	7
Software Development	4,664	7,366	14,020
Licenses	565	1,789	1,753
Systems Engineering	3,591	10,013	19,460
Training Development	464	644	1,713
Integrated Logistics Support	615	831	1,850
Quality Assurance	493	516	491
Reliability, Maintainability, and Availability	97	159	561
Configuration Management	1,127	1,560	2,174
Technical Data	837	893	1,262
Developmental Test and Evaluation	1,736	2,197	3,605
Operational Test and Evaluation	628	629	4,137
Contractor Engineering Support	2,340	3,431	5,539
Government Engineering Support	441	730	2,033
Program Management Support	1,037	1,704	2,244
Program Management Personnel	554	408	701
Travel	432	1,137	1,753
Research Personnel	80	62	210
Miscellaneous	537	928	1,122
TOTAL	20,986	38,808	70,110

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Defense Mapping Agency FY 1997 Budget Estimates

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 Date: March 1996

RDT&E Program Element/Project Cost Breakdown (R-3)

R-1 Item Nomenclature
Program Element (PE): DMA MCEG Production System Improvement/0105139B

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget to Complete FY 1997	Total Program
Product Development Organizations									
Project 200 New Processes									
Mainframe Architecture Various	SS/CPAF/MIPR	Various	5,405	5,405	5,156	0	249	0	0
UNISYS Reengineering and Modernization Various	C/CPAF/Reqn	Dec-94	4,257	4,257	516	1,916	1,825	0	0
Alternative Commercial Source Exploitation Various	Various	Jul-95	28,119	28,119	0	0	9,354	13,765	5,000
New Product Processes into DPS Intergraph	SS/CPAF/Reqn	Oct-94	3,919	3,919	1,240	2,566	113	0	0
Product and Extraction Data Base TASC	SS/CPAF/MIPR	Aug-94	2,454	2,454	1,268	807	379	0	0
Aeronautical Data Maintenance Intergraph	C/CPAF/Reqn	Apr-95	Cont	Cont	220	300	300	0	Cont
Hydrographic Source Assessment System E-Systems	C/CPAF/Reqn	Sep-94	29,400	29,400	3,586	2,700	5,364	9,850	7,900
Interface to DIA Systems Various	SS/CPAF/Reqn	Jun-95	279	279	0	279	0	0	279
Crisis Support Capability Various	SS/CPAF/Reqn	Jun-95	12,830	12,830	1,308	2,904	3,318	3,500	1,800
Modernized Catalog System Martin Marietta	C/CPFF/Reqn	Jun-94	4,768	4,768	3,234	1,534	0	0	4,768
DPS Operability Requirements Various	Various	Cont	Cont	0	0	11,445	3,251	Cont	Cont

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Exhibit R-3

UNCLASSIFIED**Defense Mapping Agency FY 1997 Budget Estimates**

Appropriation/Budget Activity: RDTER, Defense-Wide/7

R-1 Item Nomenclature
Program Element/Project Cost Breakdown (R-3)

RDTER Program Element (PE): DMA MC&G Production System Improvement/0305149B

Date: March 1996

B. Budget Acquisition History and Planning Information (Continued)

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget to Complete FY 1997	Total Program
Product Development Organizations									
Project 200 New Processes									
Modernized Catalog System Interfaces	C/CPAF/Reqn	Jun-96	2,514	2,514	0	0	1,198	816	500
Martin Marietta									2,514
Transmission of Digital Products	C/CPAF/Reqn	Aug-95	Cont	Cont	0	0	300	0	Cont
Unknown									Cont
Navigation Safety System	C/CPAF/Reqn	Aug-95	11,207	11,207	0	729	2,325	3,153	5,000
Various									11,207
System Operability Improvements	SS/CPAF/Reqn	Various	8,111	8,111	6,170	141	800	1,000	0
Various									8,111
Joint Engineering Team Actions	SS/CPAF/Reqn	Various	2,539	2,539	2,193	346	0	0	0
Productivity Enhancements	C/CPAF/Reqn	Dec-94	Cont	Cont	0	0	1,000	0	Cont
Unknown									Cont
Migration of MC&G Production System	C/CPAF	Jun-97	Cont	Cont	0	0	0	10,000	Cont
Unknown									Cont
Exploitation of Enhanced Imagery System	C/CPAF	Dec-96	78,900	78,900	0	0	0	24,100	54,800
Miscellaneous	Various	Various	Cont	Cont	12,721	6,764	838	675	Cont
Various									Cont
Product Development Organizations Total		Cont	Cont	37,612	20,986	38,808	70,110	Cont	Cont
Support and Management Organizations Total		0	0	0	0	0	0	0	0
Test and Evaluation Organizations Total		0	0	0	0	0	0	0	0
Government Furnished Property Total		0	0	0	0	0	0	0	0

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Exhibit R-3

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Defense Mapping Agency FY 1997 Budget Estimates

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 Date: March 1996

RDT&E Program Element/Project Cost Breakdown (R-3)

R-1 Item Nomenclature
Program Element (PE): DMA MCAG Production System Improvement/0305139B

B. Budget Acquisition History and Planning Information (Continued)

Item Description	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget to Complete FY 1997	Budget to Complete FY 1997	Total Program			
Product Development Organizations												
Project 200 New Processes												
Product Development Property Total												
Support and Management Property Total												
Test and Evaluation Property Total												
Subtotal Product Development												
Subtotal Support and Management												
Subtotal Test and Evaluation												
Total Project:												
37,612	20,986	38,808	70,110	Cont	0	0	0	0	0			
0	0	0	0	Cont	0	0	0	0	0			
0	0	0	0	Cont	0	0	0	0	0			
37,612	20,986	38,808	70,110	Cont								

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Exhibit R-3

UNCLASSIFIED**Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

Appropriation/Budget Activity:	RDT&E, Defense-Wide/7	R-1 Item Nomenclature			Program Element (PE): DMA MC&G Production System Improvement /0305159B		
Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
Project 300 New Concepts	11,198	17,157	16,321	14,980	22,900	18,512	20,040

(U) Project Justification Narrative:

- (U) As the DoD lead for Mapping, Charting and Geodesy (MC&G), DMA is responsible for advancing the state-of-the-art in MC&G production and exploitation technology; addressing Global Geospatial Information issues embedded in DoD Science and Technology thrust areas identified by OSD/Director, Defense Research and Engineering; and participating in national and international MC&G standards initiatives. Concept initiatives in support of this mission include:
 - The Enhanced Product Prototyping Environment (EPPE) which provides a rapid product development and system prototyping capability to support emerging Service requirements for digital information and products.
 - The MC&G Utility Software Environment (MUSE) which is a joint program with the military service labs to develop and distribute verified and validated standard MC&G utility software to users throughout the DoD.
 - Support to national and international standards organizations to develop national and international MC&G standards in cooperation with other MC&G producing organizations such as the National Science Foundation, the North Atlantic Treaty Organization, and the International Hydrographic Organization.
 - The Interoperable Map Software project which will develop/reengineer joint mapping software for use throughout DoD, resulting in interoperable C4I systems.
- Beginning in FY 1996, this project also includes initiatives previously identified under Defense Reconnaissance Support Activities (PE 0305159B) including evaluation of developing or planned advanced systems with potential for MC&G data exploitation. Developments address data extraction algorithms, accuracy initiatives, and operational scenarios.
- (U) FY 1995: Performed concept investigation and began development of Global Geospatial Information and Services (GGI&S) data warehouse and related concepts (\$3,260); continued MC&G Utility Software Environment (MUSE) development and implementation (\$2,000); continued technical support to national and international standards organizations (\$1,248); continued technology studies (\$1,530); performed DPS migration studies (\$682); supported prototyping efforts and concept studies with the Enhanced Product Prototyping Environment (EPPE) (\$850); and performed other activities supporting new concepts (\$1,628).
- (U) FY 1996: Continue technology studies related to migration (\$1,675); continue development of GGI&S data warehouse and related concepts (\$2,555); continue MUSE development and implementation (\$1,600); continue technical support to national and international standards organizations (\$800); continue development of concepts begun in PE 0305159B which include initiatives to continue primary source activities to improve accuracy and quality control processes (\$2,160) and begin requirements development for supporting source assessment and accuracy evaluation operations capabilities (\$857); perform DPS migration studies (\$4,000); develop concept for exploitation of advanced sensors; e.g., hyper-spectral investigation (\$2,500); continue support to EPPE (\$500); and perform other activities supporting new concepts (\$510).

Exhibit R-2

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**Defense Mapping Agency FY 1997 Budget Estimates
RD&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

- (U) FY 1997: Continue technology studies (\$1,800); complete initial development and begin preplanned process improvements of GEIES data warehouse and related concepts (\$2,250); continue MUSE development and implementation (\$2,000); continue technical support to national and international standards organizations (\$1,100); continue investigations of advanced sensor sources, e.g., hyper-spectral investigation (\$1,800); continue to improve accuracy and quality control processes (\$3,321); continue requirements development for supporting source assessment and accuracy evaluation operations capabilities (\$700); continue support to EPPE (\$500); begin development of Interoperable Map Software (\$2,800); and perform other activities supporting new concepts (\$50).

Exhibit R-2

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Defense Mapping Agency FY 1997 Budget Estimates
RDTE & Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity:	RDTE, Defense-Wide/	R-1 Item Nomenclature	Program Element (PE):	DMA	MC&G Production	System Improvement	Total Cost	
Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Complete Cost
Project 300 New Concepts	11,198	17,157	16,321	14,980	22,900	18,512	20,040	Cont

C. (U) Other Program Funding Summary	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost	
Procurement:	5,031	12,058	2,200	1	3,900	1	9,050	1	11,250	1

Related RDTE
Program Element 0305159B, Defense
Reconnaissance Support Activities

D. (U) Schedule Profile

	FY 1995				FY 1996				FY 1997			
	1	2	3	4	1	2	3	4	1	2	3	4
Global Geospatial Mapping Information and Services (GGMIS)	AOC					AOC				D		
Technology Studies	AOC		D		AOC				D	AOC		D
MC&G Utility Software Environment (MUSE)	AOC		D		AOC				D	AOC		D
Support to MC&G Standards Organizations	AOC		D	AOC				D	AOC			D
Primary Source Improvement Activities					AOC				AOC	D		
Source Assessment System Upgrades					AOC				D	AOC		D
Primary Source Operations										AOC	D	
Enhanced Product Prototyping Environment (EPPE)	AOC		D	AOC				D	AOC		AOC	D
Advanced Sensors (hyper spectral investigation)					AOC			D	AOC		D	
Interoperable Map Software									AOC			
DPS Migration Studies					AOC	D						

AOC-Award of Contract

D-Delivery

¹Funds identified in FY 1997-FY 2001 have been transferred to the Operations and Maintenance appropriation in accordance with expense/investment criteria policy change.

Exhibit R-2

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UNCLASSIFIED**Defense Mapping Agency FY 1997 Budget Estimates**

RDT&E Program Element/Project Cost Breakdown (R-1) Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature
Program Element (PE): DMA MCTG Production System Improvement/0305119B**A. Project Cost Breakdown (\$ In Thousands)**

Project Cost Categories:	FY 1995	FY 1996	FY 1997
Primary Hardware Development		1,253	212
Ancillary Hardware Development			
Development Support Equipment	77	69	83
Acquisition			
Research Support Equipment			
Acquisition	588	1,704	1,483
Software Development	78	69	100
Licenses		3,792	3,560
Systems Engineering	3,561	121	16
Training Development		121	16
Integrated Logistics Support	45	36	18
Quality Assurance			
Reliability, Maintainability,			
and Availability			
Configuration Management	22	17	5
Technical Data	806	69	20
Developmental Test and		824	590
Evaluation	354	1,561	607
Operational Test and Evaluation	22	1,326	215
Contractor Engineering Support	3,192	4,187	6,251
Government Engineering Support	1,949	1,596	2,609
Program Management Personnel	482	395	507
Travel	22	17	29
Research Personnel			
Miscellaneous			
TOTAL	11,198	17,157	16,321

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Exhibit R-3

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Defense Mapping Agency FY 1997 Budget Estimates

Appropriation/Budget Activity: RDTE, Defense-Wide/
RDT&E Program Element/Project Cost Breakdown (R-3)

Date: March 1996

R-1 Item Nomenclature
Program Element (PE): DMA M&G Production System Improvement/0305139B

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget FY 1997	Budget to Complete	Total Program
Product Development Organizations										
Project 100 New Concepts										
Primary System Operations (S18) SEG 18	MIPR	Various	Cont	Cont	0	0	857	700	Cont	Cont
Primary Source Improvement Activities Various	SS/CPAF/Reqn	Various	Cont	Cont	0	0	2,160	3,321	Cont	Cont
Advanced Sensor Activities Various	MIPR	Various	Cont	Cont	0	0	1,500	1,800	Cont	Cont
Interferometric SAR Unknown	C/CPAF/Reqn	Jun-96	1,000	1,000	0	0	1,000	0	0	1,000
Technology Studies Various	Various	Various	Cont	Cont	1,497	1,530	675	800	Cont	Cont
Data Warehouse Various	C/CPAF/Reqn	Jun-95	Cont	Cont	500	3,260	2,555	2,250	Cont	Cont
Venture Technology Various	C/CPAF/Reqn	Dec-94	Cont	Cont	0	887	1,000	1,000	Cont	Cont
Support to M&G Standards Unknown	C/FP/Regn SS/FP/MIPR/PO/Regn	Jul-95	Cont	Cont	948	1,248	800	1,100	Cont	Cont
M&G Utility Software Environment Various	SS/FP/MIPR	Jan-95	Cont	Cont	1,827	2,000	1,600	2,000	Cont	Cont
Inoperable Map Software Unknown	MIPR	Mar-97	Cont	Cont	0	0	0	2,800	Cont	Cont
DPS Migration Studies Various	Various	Feb-96	4,682	0	682	4,000	0	0	4,682	4,682
Miscellaneous Various	Various	Cont	Cont	2,044	1,591	1,010	550	Cont	Cont	Cont
Product Development Organizations Total	Cont	Cont	6,816	11,198	17,157	16,321	Cont	Cont	Cont	Cont
Support and Management Organizations Total	0	0	0	0	0	0	0	0	0	0
Test and Evaluation Organizations Total	0	0	0	0	0	0	0	0	0	0
Government Furnished Property Total	0	0	0	0	0	0	0	0	0	0

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Exhibit R-3

UNCLASSIFIED**Defense Mapping Agency FY 1997 Budget Estimates**

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7**RDT&E Program Element/Project Cost Breakdown (R-3)**
R-1 Item Nomenclature
Program Element (PE): DMA MCIG Production System Improvement /D305139B**B. Budget Acquisition History and Planning Information (Continued)**

<u>Contract Description</u>	<u>Method/Type of Funding</u>	<u>Award or Obligation Date</u>	<u>Delivery Date</u>	<u>Total prior to FY 1995</u>	<u>Budget FY 1995</u>	<u>Budget FY 1996</u>	<u>Budget FY 1997</u>	<u>Budget to Complete</u>	<u>Total Program</u>
Product Development Organizations									
Product_100_New Concepts									
Product Development Property Total									
Support and Management Property Total									
Test and Evaluation Property Total									

Subtotal Product Development	6,816	11,198	17,157	16,321	cont	Cont
Subtotal Support and Management	0	0	0	0	0	0
Subtotal Test and Evaluation	0	0	0	0	0	0
Total Project:	6,816	11,198	17,157	16,321	cont	Cont

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Exhibit R-3

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature

Program Element (PE): Defense Reconnaissance Support Activities/0305159B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Total Program Element (PE) Cost	15,750	See Note						Cont	Cont
Project 200 New Processes	10,000							Cont	Cont
Project 300 New Concepts	5,750							Cont	Cont

A. (U) Mission Description and Budget Item Justification:

This program evaluates and implements commercial and developing or planned advanced systems for potential MC&G data exploitation. Developments address data extraction algorithms and operational scenarios. Additional activities include test and evaluation to ensure source material support of Mapping, Charting, and Geodesy (MC&G) requirements.

Program Element 0305159B is found in Budget Activity 7 (Operational Systems Development) because the effort funded under this element supports the DMA MC&G production system.

B. (U) Program Change Summary

	FY 1995	FY 1996	FY 1997	Total Cost
FY 1996/1997 President's Budget	19,548	000	000	Cont
Adjustments to Appropriated Value Reprogrammed to MC&G Production System Improvement (PE 0305139B)		-3,798		
Current Budget Submit	15,750	000	000	Cont

Change Summary Explanation:

Beginning in FY 1996, this Program Element merged into DMA MC&G Production System Improvement (PE 0305139B) because the activities contained evolved into enhancements to the overall DMA MC&G production system.

Exhibit R-2

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**Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

Appropriation/Budget Activity:	RDT&E, Defense-Wide/7	R-1 Item Nomenclature			Program Element (PE): Defense Reconnaissance Support Activities/0305159B				
Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Cost to Complete	Total Cost
Project 200 New Processes				10,000				Cont	Cont

(U) Project Justification Narrative:

- (U) As a Combat Support Agency, DMA is responsible for establishing and maintaining the production processes required to support Service and Command Mapping, Charting, and Geodesy (M&G) requirements. The initiative within this project implements M&G data exploitation from alternative commercial imagery systems (e.g., LANDSAT, SPOT and emerging one- and three-meter commercial systems), Synthetic Aperture Radar, and foreign national sources. Developments address data extraction algorithms and operational scenarios and include development of capabilities to process, integrate, and archive commercial image source into the existing DMA production system and increase crisis response capability.

• (U) FY 1995: Awarded contract and began development of modifications to DMA's production system which will allow the exploitation of alternative commercial/other imagery sources (\$10,000). These efforts are described in the JMIP Congressional Justification Book.

- (U) FY 1996: See DMA M&G Production System Improvement (PE 0305139B).
- (U) FY 1997: See DMA M&G Production System Improvement (PE 0305139B).

Exhibit R-2

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**Defense Mapping Agency FY 1997 Budget Estimates
RD&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

R-1 Item Nomenclature

C. (u) Other Program Funding Summary

Related RDT&E: Program Element 0305139B, DMA MC&G Product System Improvement

D. (U) Schedule Profile

		FY 1995			
		1	2	3	4
Alternate Source Exploitation					AOC
AOC-Award of Contract					

Exhibit R-2

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Defense Mapping Agency FY 1997 Budget Estimates

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7

RDT&E Program Element/Project Cost Breakdown (R-3)

R-1 Item Nomenclature
Program Element (PE): Defense Reconnaissance Support Activities/030515

A. Project Cost Breakdown (\$ in Thousands)

Project 200 New Processes	FY 1995	FY 1996	FY 1997
Project Cost Categories:			
Primary Hardware Development	1,150		
Ancillary Hardware Development			
Development Support Equipment			
Acquisition			
Research Support Equipment			
Acquisition	2,950		
Software Development	380		
Licenses	4,230		
Systems Engineering			
Training Development			
Integrated Logistics Support			
Quality Assurance	110		
Reliability, Maintainability,			
and Availability	110		
Configuration Management	150		
Technical Data			
Developmental Test and			
Evaluation			
Operational Test and Evaluation			
Contractor Engineering Support	920		
Government Engineering Support			
Program Management Support			
Program Management Personnel			
Travel			
Research Personnel			
Miscellaneous			
TOTAL		10,000	

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Exhibit R-3

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Defense Mapping Agency FY 1997 Budget Estimates

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature
RDT&E Program Element/Project Cost Breakdown (R-3) Program Element (PE): Defense Reconnaissance Support Activities/030515

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget to Complete FY 1997	Total Program
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Product Development Organizations

Project 200 New Processes

Alternate Commercial Source Exploitation Various	Various	Jul-95	Cont	Cont	4,488	10,000			Cont
Product Development Organizations Total					4,488	10,000			
Support and Management Organizations Total					0	0	0	0	0
Test and Evaluation Organizations Total					0	0	0	0	0
Government Furnished Property Total					0	0	0	0	0

Contract	Method/Type of Funding Vehicle	Award or Obligation Date	Delivery Date	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget to Complete FY 1997	Total Program
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Product Development Property Total

Support and Management Property Total

Test and Evaluation Property Total

Subtotal Product Development	4,488	10,000		Cont
Subtotal Support and Management	0	0		0
Subtotal Test and Evaluation	0	0		0
Total Project:	4,488	10,000		Cont

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Exhibit R-3

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**Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)**

Date: March 1996

Appropriation/Budget Activity:	RDTE, Defense-Wide/7	R-1 Item Nomenclature Program Element (PE): Defense Reconnaissance Support Activities/0305159B
Cost (in \$ Thousands)	FY 1995 FY 1996 FY 1997 FY 1998 FY 1999 FY 2000 FY 2001	Cost to Complete Total Cost
Project 300 New Concepts	5,750	Cont Cont

(U) Project Justification Narrative:

• (U) As the DOD Program Manager for Mapping, Charting, and Geodesy (MC&G), DMA is responsible for advancing the state of the art in MC&G production and exploitation technology, and addressing the MC&G issues embedded in DoD Science and Technology thrust areas identified by OSD/Director, Defense Research and Engineering. Concept initiatives in support of this mission include evaluation of developing or planned advanced systems with potential for MC&G data exploitation. Developments address data extraction algorithms, accuracy initiatives, and operational scenarios.

• (U) FY 1995: Continued studies and requirements development for the design, integration, and exploitation of new national sensors into the DMA production system (\$1,040); analyzed and integrated new accuracy requirements into existing DMA processes (\$3,210); delivered a capability to interface with the Requirements Management System (\$1,500). These efforts are described in the JMIP Congressional Justification Book.

- (U) FY 1996: See DMA MC&G Production System Improvement (PE 0305139B).
- (U) FY 1997: See DMA MC&G Production System Improvement (PE 0305139B).

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Defense Mapping Agency FY 1997 Budget Estimates
RDT&E Budget Item Justification Sheet (R-2 Exhibit)

Date: March 1996

Appropriation/Budget Activity: RDT&E, Defense-Wide/7 R-1 Item Nomenclature

Program Element (PE): Defense Reconnaissance Support Activities/0305159B

Cost (in \$ Thousands)	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Total Cost
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Project 300 New Concepts	5,750							Cont
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C. (U) Other Program Funding Summary	FY 1995	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	Total Cost
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Procurement:	731							Cont
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Related RDT&E Program Element 0305139B, MC&G Production System Improvement	11,198							Cont
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D. (U) Schedule Profile

		FY 1995			
		1	2	3	4
Primary Source Improvement Activities	AOC		D		
	D			D	
Source Assessment System Upgrades	AOC	D	D		
Primary Source Operations		D		AOC	D

AOC-Award of Contract
D-Delivery

Exhibit R-2

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Defense Mapping Agency FY 1997 Budget Estimates

Appropriation/Budget Activity: RDT&E, Defense-Wide/7

Date: March 1996

RDT&E Program Element/Project Cost Breakdown (R-3)

R-1 Item Nomenclature
Program Element (PE), Defense Reconnaissance Support Activities/010515

A. Project Cost Breakdown (\$ in thousands)

Project 300 New Concepts	FY 1996	FY 1997
Project Cost Categories:		
Primary Hardware Development	302	
Ancillary Hardware Development		
Development Support Equipment		
Acquisition		
Research Support Equipment		
Acquisition	529	
Software Development	1	
Licenses	552	
Systems Engineering	30	
Training Development	30	
Integrated Logistics Support	8	
Quality Assurance	8	
Reliability, Maintainability,		
and Availability		
Configuration Management	8	
Technical Data	15	
Developmental Test and		
Evaluation	102	
Operational Test and Evaluation	302	
Contractor Engineering Support	3,090	
Government Engineering Support	566	
Program Management Support		
Program Management Personnel		
Travel		
Research Personnel		
Miscellaneous		
TOTAL		5,750

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Exhibit R-3

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Defense Mapping Agency FY 1997 Budget Estimates

Date: March 1996

RDT&E Program Element/Project Cost Breakdown (R-3)

Appropriation/Budget Activity: RDT&E, Defense-Wide/7

R-1 Item Nomenclature
Program Element (PE): Defense Reconnaissance Support Activities/020515

B. Budget Acquisition History and Planning Information

Contractor or Government Performing Activity	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget to Complete FY 1997	Total Program
Product Development Organizations									

Project 100 New Concepts

Primary System Operations (S18) SEG 18	MIPR	Various	Cont	Cont	4,247	1,500			Cont
Primary Source Improvement Activities Various	SS/CPAF/Reqn	Various	Cont	Cont	12,321	3,210			Cont
Advanced Sensor Activities Various	MIPR	Various	Cont	Cont	2,127	1,040			Cont
Product Development Organizations Total									

Support and Management Organizations Total**Test and Evaluation Organizations Total****Government Furnished Property Total**

Item Description	Contract Method/Type of Funding Vehicle	Award or Obligation Date	Delivery Date	Total prior to FY 1995	Budget FY 1995	Budget FY 1996	Budget to Complete FY 1997	Total Program
Product Development Property Total								
Support and Management Property Total								
Test and Evaluation Property Total								
Subtotal Product Development								
Subtotal Support and Management								
Subtotal Test and Evaluation								
Total Project:								

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Exhibit R-3